THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

Vol. LXXIV. Thursday, March 8, 1866. No. 6.

ON THE INHALATION OF ATOMIZED LIQUIDS, AND A DESCRIPTION OF INSTRUMENTS EMPLOYED.

To the Editors of the Boston Medical and Surgical Journal.

Some months since, at a meeting of the Society for Medical Improvement, I showed two instruments for atomizing fluids for inhalation. One of these was the hand instrument of Dr. Andrew Clark, after Bergson, and the other the steam apparatus of Siegle. This means of applying remedies to the throat and air passages is, at the present time, sufficiently well known to the profession of this city and vicinity, but our brethren in other parts of the State are probably not so well acquainted with the instrument and its superiority to every other inhaling apparatus, and I trust you will therefore give me an opportunity to say a few words, in order to bring the subject to their notice. It is perhaps needless to dwell upon the advantages to be derived by applying medicaments immediately to a diseased part instead of indirectly through the circulation. There are, of course, many organs which can never be reached directly, because not accessible through any natural duct; but so soon as any means is found of making a safe entrance into an organ or into any shut cavity, we are led almost instinctively to attempt the direct application of remedies. This disposition to search for the means of treating diseased conditions immediately is so universal, that we may expect, in the future, such success as would now be thought impossible.

How unsatisfactory the mediate method of treatment is in pathological changes in the air tubes, every physician knows, and from the time of Hippocrates, who himself describes an apparatus for inhalation, to the present time, a vast amount of inventive talent has been directed to the discovery of the best means for the introduction of medicinal agents into the air passages, and the apparatus which have been contrived for the purpose mentioned can be numbered by hundreds. Up to a comparatively recent period, all the apparatus invented, with the exception of those for the inhalation of pulverized* medicinal substances, so much employed by Trousseau, were designed for the inhalation of the vapor of solutions or tinctures, and notwithstanding much temporary benefit has undoubtedly been derived from this method, radical cures of chronic affections of the bronchial mucous membrane have been exceedingly rare.

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* I use the word pulverized in connection with solid substances, and atomized in connection with fluids.

It was about the year 1849 that an attempt was made at some of the Continental spas to atomize the mineral waters by throwing a jet of the liquid against the wall of a room. Subsequently, Sales Giron invented a portable instrument for atomizing fluids, and it was extensively used at the thermal establishment at Pierrefonds. The apparatus is figured in the *Medical Times and Gazette* of June 28th, 1862. It consisted of a glass vessel, to which was attached an air pump, and from the bottom of which a tube was led through the top of the vessel, ending in a minute point. The vessel being partly filled with the fluid, air was forced in by means of the pump, and a stop-cock attached to the tube being then opened, a fine stream of water was forced with great violence against a metal disc, and was broken into minute spray, which was then inhaled by the patient. When this instrument was first introduced to the medical faculty of Paris it attracted great attention, and a committee, appointed by the Academy of Medicine, made an elaborate report upon its merits, substantiating the claims of the inventor, and proving, by experiment, that the vapor reached not only the finest ramifications of the bronchi, but also the air cells. Since then a large number of instruments have been contrived, all looking to the same end, but all, with one or two exceptions, acting on the same principle—namely, driving a fine jet against a metal disc.* Of these exceptions, one was the invention of Dr. Bergson. Dr. B. placed two tubes of different calibres at right angles to each other, the smaller tube covering with its end about two thirds of the diameter of the larger tube. The end of the smaller tube being put into any fluid, and a current of air being forced through the larger, a vacuum is caused in the former; the fluid then ascends in the tube, and on reaching the top is blown into a fine mist by the current of air. Bergson connected with the smaller tube two rubber balls, by aid of one of which the air was forced into the second, which served as an elastic reservoir, and kept up a continuous stream of air through the tube, and consequently an uninterrupted jet of spray. Taking advantage of the ingenious arrangement of tubes mentioned, Siegle, of Strasbourg, invented his apparatus, which consists in substituting for the current of air a current of steam. The larger of the two tubes is introduced into a small kettle, with an alcohol lamp beneath, and the smaller tube dips into a little cup, which contains the medicament to be employed. The advantage of Siegle's apparatus over the hand instrument is this, that the patient is spared a great amount of manual labor. The latter is exceedingly convenient when inhalation is to be kept up for a short time, say a minute or two, but the hands of the operator become fatigued when the sitting is continued for a longer period than that. The steam apparatus may, of course, be used an indefinite length of time. In this respect, namely, in not employing manual labor, Siegle's instrument surpasses all other atomizers hitherto invented. Soon after receiving my Bergson-Siegle instrument, made by Galante of Paris, I had such favorable success with it in laryngeal and bronchial affections, that I determined to use my endeavors to have similar instruments made for the benefit of general practitioners. For this purpose I gave Messrs. Codman & Shurtleff a drawing of an apparatus simpler in some respects than Siegle's, at the same time suggesting the importance of attaching a safety valve to the boiler. After a considerable time (necessarily demanded in getting up a new apparatus) Messrs. C. & S. have at length produced a very beautiful and compact little instrument, which they invite physicians to inspect at their store. The pressure of steam necessary to atomize the fluid is exceedingly small, probably not more than that of two atmospheres, and greater or less amount of steam may be had by raising or lowering the alcohol flame and by the manipulation of the safety valve. The length of the stream of vapor is from six to eight inches; the length of the stream of spray from two to four feet. Six inches of steam and eighteen inches of spray is a good average. I have found by experiment that it requires about three drachms of water in the form of steam to atomize an ounce of water, the time occupied being from eighteen to twenty minutes. The spray is not sensibly warmed by the steam, and I have not found that warming the fluid to be atomized has made any very great difference in the temperature of the spray. In inhaling, the patient sits about a foot from the apparatus and breathes easily or forcibly, according as it is desired that the medicament shall reach the larynx and trachea or the finer ramifications of the bronchial tubes. It is not necessary that the mouth should be so near the apparatus that the spray is driven into it by force. The spray is so fine that it floats about like mist, and may be inhaled at any part of the visible column. In order to protect the face from the superfluous spray, numerous screens have been suggested. Messrs. C. and S. have several patterns. I think, however, I have hit upon a contrivance which seems to me to have many advantages over the screens heretofore suggested. 1st. With my contrivance that portion of the spray which is not taken up by the patient is condensed within a reservoir. There is consequently no wetting of the stand on which the apparatus rests, or of the surroundings. 2d. The Bergson tubes, which, being of glass, are liable to many accidents, are completely protected from injury. 3d. The little "spitting" of hot water caused by the steam condensing in the tube and being forced out violently by the steam, in my contrivance does not alarm or annoy the patient, as the stream of spray is not directed immediately towards the patient's mouth. 4th. The temperature of the spray inhaled is raised by the warming of the vessel by the steam.

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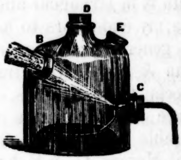
* There is still another instrument, made by Luer, by which a spray is made by streams of water being forced, by means of a screw piston, through two fine openings in a button on the extremity of a flexible metal tube. The two streams impinge against one another, and are broken into a fine spray; and yet another contrivance, in which a fine stream of liquid driven from a partially filled caoutchouc bag is broken into spray by a current of air driven from the same bag at the same moment through the orifice of a tube, into which the first tube is set. The central tube, of course, descends into the bottom of the bag and of the liquid. The circumferential tube just enters the bag.

The contrivance referred to is a glass jar, through the side of which, near the bottom, is introduced a cork, which supports the Bergson tubes. The spray is therefore made in the jar. Such as is not inhaled is condensed on the sides.



Annexed is a representation of the jar, which is about five and a half inches in diameter and five inches high to the shoulder. At the side is an opening (C), through which the tubes are introduced into the interior. To the end of the tube, which juts beyond the cork exteriorly, is attached a bit of rubber tubing, and this again is attached to the glass tubing which enters the steam apparatus. In the centre of the bottom of the jar (which has a convexity inwards) is blown a receptacle (A) large enough to contain an ounce or two of liquid. Thus the condensed spray and the steam within the jar do not dilute the original medicament in the little cup, but run down to the space outside this latter. At the top of the jar are three openings. One (D) is placed just over the little receptacle. This is used for the introduction of the medicament, and should be corked up during the inhalation, on account of its proximity to the face of the patient. The second opening (E) is over the points of the Bergson tubes, and the third (B), the mouth-piece, juts out from the shoulder of the jar, at a convenient angle for the approach of the mouth. This mouth-piece is not exactly opposite to the tubes, but a little way round, so that the spray does not shoot directly through the opening. By this arrangement the patient is protected from any little spirt of hot water. The horizontal tube must be turned up slightly at the end, so as to throw the spray upwards. After inhalation, the jar may be disengaged from the apparatus, the medicament poured out through the mouth-piece, and the jar washed by shaking with water. The perpendicular tube may be cleaned by leaving a little water in the jar and attaching it for a moment to the apparatus. Should the perpendicular tube become obstructed, it may be picked at by a bristle brush thrust through the opening at the top. If a wire is used, it must be a soft silver wire. *A needle or pin must on no account be used.* Should it be necessary, the tubes may be removed by taking out the cork at the side. To prevent all chance of breakage on removal, I have made the horizontal tubes in two parts, connected by rubber tubing, so that a kind of hinge is made well up to the connecting rod. The cork may be made of such a diameter, say an inch and a quarter, and the angle of the tubes placed so well up to the surface of it that there is the very smallest possible chance of breakage, even when the cork is frequently removed.

The jar intended to be used as a hand instrument is smaller than the one already described—namely, about three inches and a half in diameter and four inches in height. There is no cup blown in the bottom, but in order to gain a comparatively great depth of liquid with a small amount of medicament, the bottom is blown with a considerable convexity inwards. By this means the liquid is collected at the circumference of the jar. Attached to the Bergson tube is a rubber ball, by pressing which the spray is produced inside the jar. The jet is thrown, not directly towards the opening intended for the mouth of the patient, but just below it. By this means the coarser particles of the spray are thrown against the side of the jar, to be returned to the bottom; the finer particles whirl about in the jar and are taken up by the patient at each inspiration. Thus all the advantages of a continuous stream of spray are obtained. It will at once be seen that an ounce of medicament in this contrivance will go as far as many ounces in any other instrument. There is absolutely no waste. After the sitting, the medicament should be poured through the mouth-piece of the jar into a bottle and set aside for future use, and the jar be washed as before described. For the various reasons referred to, this seems to me to be the cheapest atomizer yet made, while it is as efficient as any and more simple.*

The method of inhalation I have been describing is applicable to all the various pathological changes which affect the respiratory tract, from the uvula, the pharynx with its arches, the larynx and trachea, and the bronchi and its ramifications, and to the acute as well as to the chronic affections. The success attending the treatment of chronic bronchitis and the asthmatic condition consequent upon it has been very marked, such cases yielding readily to this form of inhalation when all other means had failed. Cases are extremely frequent of this affection, and they are often among the most obstinate diseases that physicians have to do with; many cases going on in spite of all efforts to arrest the disease, to loss of the contractile power of the lung, and hopeless emphysema. Such a condition is of course past cure, but I have no doubt that a partial loss of power, a temporary emphysematous condition—if I may so term it—may be restored by arresting the abnormal secretion and altering the condition of the liming membrane of the respiratory tract. I must not forget to refer to this method of inhalation as a palliative in phthisis, by diminishing the amount of bronchial secretion.

In order to demonstrate the utility of the spray-inhalation, I will mention two cases of chronic bronchitis in which the success was quite striking.

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* Messrs. Codman & Shurtleff will furnish this instrument also.

CASE I.—W. F., aged 46 years, but looking ten years older, came to me Nov. 15th. Four years before he had had an attack of bronchitis, which lasted two months, and obliged him to desist from his business. In every autumn since, about October, he has had severe bronchitis, with copious expectoration, constant difficulty of breathing and asthma. The appetite has been poor and the strength greatly reduced; he has been unable to lie down at night, and has had to sleep in his chair the greater part of the time. This state of things has lasted till the latter part of May in each year. During the summer he has been comfortable, though the severity of the disease has impaired his health materially. He has been under treatment by myself and others every winter, but with only slight and temporary relief. This year the attack came on towards the latter part of October, apparently with a cold. As in former years, he sleeps in a chair, if he can say that he sleeps at all, the night being very much broken up by the difficulty of breathing; goes about with much inconvenience on account of shortness of breath; "wheezes" all the time, and at night the asthma is very distressing; can eat nothing with any relish. On examination of chest, mixed mucous and sonorous râles are heard over both sides, front and back. The expiration is prolonged, as evidenced by the continuance of the râles, the respiratory murmur being very feeble, or scarcely heard at all over the noise of the râles. There is no other marked symptom, either on auscultation or percussion. The diagnosis was, of course, severe bronchitis, with partial loss of power of the contractile tissue of the lungs. Inhalation of an atomized solution of tannin, about three grains to the ounce, was commenced Nov. 15th. The amount of fluid used was about an ounce, that quantity requiring a sitting of about twenty minutes. Of course the whole ounce was not inhaled, but only a very small proportion of it. The night following the first inhalation, the patient went regularly to bed and slept six hours.

Nov. 20th.—Has inhaled, as on the first day, once daily, and has slept seven hours at night comfortably, without waking; coughs a good deal less; breathing much improved; has not had any "smothered" turn at night; expectoration diminished and less tough; appetite better—partook last night of animal food, which he has not been able to touch for some time; shortness of breath much less, and walks with greater ease.

23d.—Has omitted inhalation, necessarily, for two days; still greatly improved; "wheezing" all gone; slept the whole of last night; expresses his relief in the most extravagant terms. On auscultation, only an occasional dry râle is heard, and the respiratory murmur is more normal.

On Nov. 29th, the patient having had twelve inhalations, and being so much improved, was told to go about his ordinary business, and stay away as long as he remained comfortable. On Dec. 15th he appeared, to say that he was entirely well in every respect.

Feb. 8th.—Have seen patient to-day; went to his house in order to complete the record of the case. Found him looking very well; says he has been perfectly well till about a week ago, when, being exposed by sitting in a cold, damp room, he took cold, and has had some expectoration, with a slight disturbance of sleep, but not enough to induce him to ask for inhalation. On examination of chest, the rhythm of respiration is normal. On forced inspiration, an occasional slight mucous râle is heard.

Case II.—Miss A. M. has for a year past been troubled with severe bronchitis, depressing her both physically and mentally. There is occasional shortness of breath and an annoying cough, with expectoration of mucus. The nights are much disturbed by coughing. On examination of chest, mixed moist and dry râles are abundant over both sides. In order to compare the value of the inhalation with the ordinary mode of treatment, I gave tinct. ferri muriat., gtt. xv., three times a day, and Dover's powder at night, and if necessary in the day time. I also tried balsamic preparations. This was kept up a month, with only slight relief. The sleep was a little better, but the symptoms were in general much the same. I then commenced the inhalation of the spray of a solution of tannin, three grains to the ounce. The relief was immediate and decided. The nights commenced at once to be free from cough, and she expressed herself as improved in every respect. She is now, two weeks after commencing inhalation, exposing herself to changes of weather which before would have induced severe paroxysms of coughing. On examination of chest, three weeks after commencing treatment, only an occasional moist râle is heard.

The therapeutic agents which may be employed in the above method of inhalation are the different astringent and alterative substances in solution, or as tinctures, of which I may mention the following:—

Nitrate of Silver, from three to ten grains to the ounce of water, according to the urgency of the case. The duration of the sitting should be shortened in proportion to the increase in the strength of the solution.

Tannin, from three to eight grains to the ounce.

Alum, from four to fifteen grains to the ounce.

Perchloride of Iron, one to ten drops to the ounce, has been used with marked success in obstinate hæmoptysis.

Acetate of Lead, from one to eight grains.

Sulphate of Zinc, from half a grain to five grains.

Common Salt, from five to twenty grains to the ounce.

Tincture of Opium, one to ten drops.

Corrosive Sublimate, one or two grains to the ounce, from half a grain to two grains to the ounce, watching the effect of the inhalation carefully.

The Salts of Iodine, Bromine, Chlorine, may be used.

Fowler's Solution has been used in the dose of from half a drop to five drops to the ounce.

Carbolic Acid, in a very diluted form, say half a drachm to from sixteen to thirty ounces of water, is recommended for excessive and fœtid bronchial secretion.

The Liquor Iodinii Comp., diluted with from four to ten parts of water, is useful.

A properly diluted solution of *Permanganate of Potash* would no doubt be serviceable as a deodorizer in gangrene of the lung.

Boston, March 1, 1866. HENRY K. OLIVER, M.D.

CASES IN COUNTRY PRACTICE.—No. XI.

By JOHN ELLIS BLAKE, M.D., OF Middletown, Conn.

[Communicated for the Boston Medical and Surgical Journal.]

PELVIC ABSCESS.

I ATTENDED Mrs. S. in her confinement, February, 1861. There was nothing peculiar about the labor, nothing abnormal, either in its duration or character, that I remember, save a sharp cramp in the left groin, running down the leg of that side, caused by the pressure of the head of the child, very severe for a time, but soon over, and no worse than I have often seen when nothing came of it, and to which I then gave little thought. It would appear, however, that the soft parts were really much injured by this severe pressure, short as it was, for in less than ten days there were symptoms of trouble, and the beginning of an illness from which the patient did not recover for more than four months. First, there was constitutional disturbance, febrile action, pain and tenderness in the left groin, soreness in the course of the femoral vein, and of the left thigh, which was much swollen. I feared phlegmasia dolens, but this swelling and soreness did not last long, at least to any great degree, and it was hoped the trouble would pass by. It was not, however, so to be, and before many days interval she was taken with chills, very severe pain in the back and over the region of the bladder, accompanied by great distress in micturition. She complained so much of a "bearing down" upon the bladder that an examination was made to ascertain the position of the uterus, with the idea that it might be somewhat prolapsed, or perhaps retroverted. So far from there having been any descent of that organ, however, I found it impossible on the first trial to reach the os uteri at all, and could also determine that there was no retroversion. On a succeeding examination, made in consultation with Dr. E. B. Nye, of Middletown (who during the progress of the case frequently saw it with me), the os was found very far up, almost out of reach, and with some lateral deviation. So far as we could determine, the whole organ was pressed upward, backward, and a little to one side by some means which could not at first be accurately defined. Of course it was impossible, from the tenderness over the bladder and uterine region, to make as protracted and thorough examinations as might otherwise have been done. It was deemed that there was not a sufficient probability that the treatment of the case would be enough facilitated, by the information gained by further manipulations, to compensate for the certain and perhaps protracted suffering and exhaustion likely to follow. It was evident, from the general symptoms, that pus was forming somewhere, and while waiting for the opportunity to make a more precise diagnosis, there seemed nothing better to do than to make the patient as comfortable as possible, supporting the strength and diminishing nervous irritability and pain by appropriate remedies. It was not necessary to wait long. In a short time the probable presence of pus could be made out through the vaginal wall on the left side. It was a case of pelvic abscess; but although there can be no doubt that it began as the result of over pressure of the child's head, and was one and the same process with the inflammation in the left groin, which occurred so early, yet I do not now remember that at any period of the case a direct connection was ever clearly made out between them. I have always thought that the mere superficial inflammation never reached the suppurative point, the large abscess with which we had to deal having its own walls and being influenced by the pelvic fascia in its course to the point of exit. This was into the rectum from below. A large collection formed, bulging up into that organ and breaking through. The first discharge was large—more than a pint—and pus continued to pour from the rectum for weeks in such large quantities that I feared, in spite of all that could be done, the patient would sink from it. Not only was she exhausted by this constant drain upon her system, but the irritability of the bladder and urethra returned in full force. The agony she endured with each attempt to pass water was distressing to witness. Her stomach became very irritable, and by rendering the administration not only of proper nourishment, but of the remedies for her distress, very difficult, complicated the case. In spite of the greatest constant care on the part of her attendants, her bed and clothing would become soiled with discharges both of urine and pus, most offensive to a delicate and sensitive person; and when at the worst, I do not doubt, she would have welcomed death as a relief from her sufferings. Still she did finally get well. There was no sudden change; no day could be named when she began to mend, but she slowly, and by almost imperceptible steps, crept up the hill to health, although it was many months before she could be said to have recovered. She is now well, and has since been confined, without any untoward symptoms.

Bibliographical Notices.

The Physiology of Man; designed to represent the Existing State of Physiological Science as applied to the Functions of the Human Body. By AUSTIN FLINT, Jr., M.D., Professor of Physiology and Microscopy in the Bellevue Hospital Medical College, New York, and in the Long Island College Hospital, &c. Introduction; The Blood; Circulation; Respiration. Pp. 502. New York: D. Appleton & Co. 1866.

THE Introduction to this work, which is only one of three other parts to be issued annually, is devoted to the physiological chemistry of the body.

As the author says at the commencement that he does not pretend to treat fully of this subject, we must overlook many shortcomings; but even after making all possible allowance, there is little to commend in the introduction. The ideas contained in it are in great part those given in the writings of Robin and Verdeil, and many of them have since been modified or disproved. Indeed, the author does not appear to have kept pace with the advancements made in this department of physiological science.

Following the introduction, the author treats in succession of Blood, Circulation, and Respiration.

We shall merely glance at a few points, which strike us as of especial interest, and leave the rest to the judgment of the reader.

Chapters I., II. and III. treat of the blood. Of the corpuscles of this fluid, the author says: "They are true organized structures, and like other structures are constantly undergoing decay, and are capable of self-regeneration." This view of the blood globules is, we think, the correct one, although the opposite has been advanced by several able writers. We cannot, however, agree with the opinion given on the 116th page, that these globules "are perfectly homogeneous and are not provided with an investing membrane," for we consider the weight of evidence to be very much against such a conclusion.

In the second chapter several pages are devoted to the quantitative analysis of the blood. The usual modes of analysis are objected to on the ground that they give only the amount of *dry residue* of the organic principles, and not the amount of these principles in their natural *moist condition.* This objection is a good one, and one that has long been felt, but the method proposed by the author as a substitute for the usual estimation by dry residue of the blood corpuscles, is itself by no means unobjectionable.

The method proposed by Figuier is the one recommended by Dr. Flint. This method consists essentially in washing defibrinated blood upon a filter with sulphate of soda. This salt renders the corpuscles incapable of passing through the filter, while the serum readily transudes. Unfortunately, however, *all* the corpuscles are not retained upon the filter; many of them pass through, and even when the filtrate appears perfectly colorless to the eye, a microscopic examination reveals plenty of globules. Moreover, *all* the serum is not separated, even by the most thorough washing. Other objections, which we have not space to mention, exist, so that the method cannot be considered as a reliable one. The plan adopted by Schmidt, for the estimation of the globules in a moist state, although by no means perfect, is preferable to that of Figuier.

In Chapter III. the cause of the coagulation of the blood is discussed at some length, and, as we think, with great clearness and impartiality.

Dr. Richardson's theory, and the principal experiments upon which it is based, are carefully examined and a proper value set upon them. The conclusion at which Dr. Flint arrives will be best given in his own words, and we are inclined to believe that, considering the subject in its present state of development, few will dispute the soundness of his views.

"The idea of simple contact with living tissues preventing coagulation, hardly merits discussion. It is well known that coagulation frequently takes place during life, almost always following arrest of the circulation. After division of the vessels the blood in contact with parts performs its conservative function in the arrest of hæmorrhage. There is certainly something very curious in the effect of the contact of foreign substances, and the experiments on this point are very striking. Why is it that a coagulum forms upon a fine thread or a needle passed through a vessel; or on the wire with which the blood in Mr. Lister's apparatus was stirred, though there was no exposure to the air? And why did the blood, which was only gently stirred for a few seconds with a smooth ivory rod, coagulate so much more rapidly than that which was undisturbed?

"These are questions which we must acknowledge our inability to answer. The phenomena cannot be satisfactorily explained by the supposition that ammonia is evolved; on the other hand, this is not sufficient reason for rejecting the fact experimentally demonstrated, that, out of the organism, ammonia, a substance capable of maintaining the fluidity of the fibrin, is given off from coagulating blood."

Chapters IV. to X. treat of the circulation, and this, we think, constitutes the most valuable part of the work.

In considering movements of the heart, the author bestows considerable attention upon the interesting and oft-disputed question, whether the organ elongates, or, on the contrary, shortens during the systole. The first of these two views has been ably advocated by several eminent writers, but we believe it to be erroneous, and consider that Dr. Flint is correct in asserting that the organ shortens during contraction. He says:—

"There is no doubt that the point of the heart is protruded during the ventricular systole; but the author was led by perusal of recent experiments of Chauveau and Faivre to recognize the fact that this protrusion is probably due to other causes than the elongation of the ventricles, and that *during the systole the ventricles are shortened.*"

He then goes on to describe the experiments by which he has satisfied himself of the truth of the views of the foreign observers just cited.

The idea that the organ elongates he shows to be owing to the fact that *the whole organ is thrown forward* during contraction, and that this *protrusion* has been mistaken for *elongation*. If the organ be pinned down *in situ* to a flat piece of wood, it is then evident that it shortens at the moment of contraction, and the degree of shortening can be easily measured.

The fact that certain observers have noticed an elongation of the organ when removed from the body and held in the hand, is, he shows, probably due to the position in which it was held. He says: "If, for example, we take the heart of a turtle between the thumb and finger and hold it with the point upwards, the ventricle is so thin and flabby that it will become flattened during the intervals of contraction, and the point will be considerably elevated at each systole; but if we reverse the position and allow the point to hang down, it will be drawn up, and the ventricle will shorten with the systole."

In speaking of the valves of the heart, the author states that not only does the bicuspid valve play the part of a safety-valve by permitting regurgitation, which has long been known, but also that he has discovered that the pulmonic valves play a similar part.

We might mention a great many more facts of interest concerning the circulation, which are mentioned in the book before us, but as it would be impossible for us to notice all, and as a selection would not be easy, we will leave this portion of the work, merely remarking that we regard it as a most valuable addition to physiological literature.

The last four chapters treat of respiration. Of this part of the book we cannot speak so highly as we have done of that just reviewed. It is, upon the whole, much inferior. In the first place, we cannot feel the same interest in it as in the portion devoted to the circulation, for the reason that it is in great part a simple repetition of what we are already familiar with, and what has been repeated over and over again in treatises on physiology. The author has few new ideas or experiments that are of interest to offer, and consequently this portion of the book is not of any particular physiological value. Added to this, it is in several respects deficient. Thus, for example, in a work intended "to treat comprehensively of the physiology of man," we should look for a much fuller description of the minute anatomy of the lungs than that given, the space devoted to this part of the subject being but little greater than that found in many of the text books. As a consequence of this limitation, many important points are merely touched upon, or even passed over in silence.

In describing the mechanism of inspiration and expiration, the author fails to notice the important physical principles which are involved in the process, the only allusion to the subject being contained in a few words, in which he says: "Inspiration takes place as a consequence of enlargement of the thoracic cavity, and the entrance of a quantity of air through the respiratory passages corresponding to the increased capacity of the lungs." No special reference is made here or elsewhere to the laws of gaseous expansion and tension which play so prominent a part in respiration.

The explanation given of the diffusion of gases in the lungs is likewise unsatisfactory. It contains the same errors that exist in most treatises on physiology, in regard to the application of the laws of diffusion, as established by Graham, to the respiratory function.

We all know that the air contained in the air-cells and smaller bronchial tubes is not changed by the ordinary respiratory movements. It is only the air of the trachea and larger bronchial passages that is thus renovated. But, inasmuch as the air of every ordinary expiration is found to contain carbonic acid, and to have lost oxygen, it is evident that, in some manner, the former gas finds its way outward from the air cells into the larger bronchial tubes and trachea, and the latter gas finds its way inward to the air cells.

It has generally been considered that these movements of the gases take place in accordance with the law of the diffusion of gases known as "Graham's law." Mr. Graham found that when two gases were allowed to communicate they diffuse into each other, and that their diffusibility was inversely proportionate to the square root of their densities. In these experiments the gases were both of the same temperature, and subjected to equal pressure. They were so placed that they had to diffuse contrary to their specific gravities, that is, the lighter gas was placed uppermost.

Graham's results have been applied to the explanation of the movement, of the gases in the lungs, and it has been thought that in accordance with his law the carbonic acid passes out and the oxygen passes in. Thus in the present work the author says: "The interchange between the fresh air in the upper portions of the respiratory apparatus and the air in the deeper parts of the lungs is constantly going in, in obedience to the well-known law of the diffusion of gases, aided by the active currents or impulses produced by the alternate movements of the chest;" and again, "In obedience to the law established by Graham, that the diffusibility of gases is inversely proportionate to the square root of their densities, the penetration of atmospheric air, which is the lighter gas, to the deep portions of the lungs would take place with greater rapidity than the ascent of the air charged with carbonic acid; so that 81 parts of carbonic acid should be replaced by 95 of oxygen. It is found, indeed, that the volume of carbonic acid exhaled is always less than the volume of oxygen absorbed."

To this latter statement it may be, however, at once objected, that in some animals it has been noticed that more carbonic acid was exhaled, than there was oxygen absorbed.

But besides this, other objections exist.

It is certain that the diffusion of gases in the lungs takes place with much greater rapidity than is observed out of the body. The idea has somehow arisen that the diffusion of gases is an instantaneous process, and that therefore carbonic acid passes rapidly into air. An extract from Dr. Flint's work will give a good idea of the opinion generally held upon this point.

"When two gases or mixtures of gases, of different densities, are brought in contact with each other, they diffuse or mingle with great rapidity, &c."

A few years since Dr. John W. Draper made a series of experiments to determine the *absolute* rapidity of diffusion of carbonic acid into atmospheric air. The results given by Graham are merely *relative*, and therefore throw no light upon this point.

Dr. Draper found that it required *more than a minute* for carbonic acid to diffuse through a tube $\frac{6}{10}$ of an inch in diameter and 4 inches long, filled with air.

We have made experiments of a similar nature to those of Dr. Draper, and are convinced of the accuracy of his statements.

Now an ordinary act of respiration occupies but a few seconds, and yet in that time carbonic acid passes through the long and narrow air passages. Moreover Vierordt has proved that it requires but 40 *seconds* for the air in all parts of the lungs and air-passages to contain the same percentage of carbonic acid. Now, if it takes more than a minute for carbonic acid to diffuse through a tube only four inches in length, how is it possible for this gas to pass by simple diffusion through the ramifications of the air tubes in less than half that time?

The movement of the columns of air in the acts of inspiration and expiration is not sufficient to account for the rapidity of the diffusion, for out of the body the same degree of movement will not produce a corresponding degree of diffusion.

There appears, then, to be some other forces in operation besides that of simple diffusion.

We do not mean to uphold the theories that the muscles or the cilia of the bronchial tubes exert an influence over the movement of the gases concerned in respiration, for we think the author right in rejecting these agencies; but we would remark that there are two important points that have, so far as we know, escaped the notice of every physiologist who has written upon this subject, viz.: first, that the laws of the *transpiration of gases* must be consulted as well as those of diffusion, for the size of the smaller air tubes necessarily involves the operation of these laws, which are utterly different from those of diffusion; and second, that, inasmuch as the interposition of moist membranes almost completely alters the ordinary phenomena of diffusion as regards carbonic acid and air, it is not unlikely that moist membranous tubes exercise an influence over the passage of these gases. By this, we do not mean to ascribe to the animal tissues any peculiar force, such as the absurd so-called "vital force," but merely to indicate that by virtue of their chemical or physical properties these tissues may influence the movement of gases which are in contact with them.

With these remarks we will close our review; and will only say, in conclusion, that we most cordially recommend Dr. Flint's work to all interested in physiological science, the part devoted to the circulation being alone sufficient to make the book one of great value.

A Treatise on the Principles and Practice of Medicine; designed for the use of Practitioners and Students of Medicine. By Austin Flint, M.D., Professsor of the Principles and Practice of Medicine in the Bellevue Hospital Medical College, and in the Long Island College Hospital, etc. Pp. 867. Philadelphia: Henry C. Lee. 1866.

It is a rare event in literature to record the simultaneous appearance of medical treatises by father and son, especially noticeable when the works are as large and important in their aim as the two we briefly notice this week. The object of Professor Flint, senior, has been, as he states in his preface, to prepare "such a digest of the principles and practice of medicine as will be serviceable alike to the pupil in the prosecution of his studies of disease, and to the physician engaged [illegible] the practical duties of his profession." Such an under-ta[illegible] was perhaps unnecessary, unless the author had facts or views [illegible] ommunicate not contained in other works of the same nature within reach of the student. A careful examination of the book, however, does not remove this conviction, although we can heartily recommend it as another concise and clear digest of the present state of medical science and opinions concerning the general subjects of which it treats.

It is divided into two parts. Part first is devoted to general pathology, including chapters on the anatomical changes in solid parts of the body; morbid conditions of the blood; the causes of disease, or etiology; symptomatology; prophylaxis, and general therapeutics. Part second treats of diseases affecting the respiratory system, the circulatory system, the digestive system, the nervous system, the genito-urinary system, and fevers and other general diseases.

We wish we could speak in the same terms of the appearance of this book as of that of the son. It is printed in the old style of fine type and poor paper, and contrasts very unfavorably with recent medical works published by other houses.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, MARCH 8, 1866.

CONTAGIOUSNESS OF CHOLERA—CITY PHYSICIAN'S COMMUNICATION TO THE CITY GOVERNMENT.

We have at last received this interesting document, which was presented to the Board of Aldermen on the 29th of January last. It contains, in substance, a reversal of the opinion of the City Physician on this engrossing question, as expressed by him in October last, and addressed to the same body. This change of opinion is frankly acknowledged, and the evidence on which it is grounded—the very striking facts connected with the present epidemic in Europe, which at that time had not been presented to the medical profession as they have been since—is printed quite at length in the pamphlet before us. Much of this has already been given to our readers in the pages of this Journal. In addition, we find copious extracts from Dr. Kennedy's *History of the Contagious Cholera*, a synopsis of Dr. Snow's theories concerning the disease, and other evidence, which have led the City Physician to express his unequivocal conviction that cholera is a communicable disease. Of course this leads to the consideration of the measures most likely to secure to this community exemption from the dreaded epidemic, and in this connection we have an account of some of the quarantine measures heretofore put in practice in Europe for a similar object. The pamphlet concludes with a communication from Dr. Damon, late Superintendent of the Boston Dispensary, in reply to one from Dr. Reed asking for the statistics of Dispensary patients with bowel complaints during the summer months, and how far they could be fairly charged to unfavorable local influences. In his reply Dr. Damon divides the city into seven distinct districts, and gives the proportion of cases in each. A map of the city is appended, on which are indicated the localities where patients affected with these complaints resided, and it is interesting to observe that they prevailed most extensively in precisely the situations where *a priori* they might have been looked for. Most of this territory is "made land," and Dr. Damon attributes most of the sickness in such places to "emanations from drains and the soil, over-crowded dwellings and filth." In view of all these facts, the City Physician urges with renewed emphasis the great importance of the most rigid enforcement of the Sanitary Code, with the confident hope that much may done in this way to avert the pestilence or disarm it of its terrors should it appear among us. The pamphlet is a very valuable City Document, and will be the means of conveying much needed information to quarters it would not otherwise be likely to reach.

Of the new medical journals, the anticipated publication of which we have from time to time announced during the past few months, four have reached us; and thinking our readers may find a fuller introduction more profitable than the formal announcement of their appearance, we propose to give each a brief notice.

The first that comes to our hand is the *Richmond Medical Journal*, of which the numbers for January and February have been received. This is a monthly octavo of eighty pages, edited by E. S. Gaillard, M.D., and W. S. McChesney, M.D. Without any pretentious array of names of collaborators, the Editors promise to devote themselves to the highest interests of medical science, in a general way announcing that they have the promise of the support of a number of the best writers in the country. The two numbers published come fully up to the standard proposed by the Editors, and contain several articles of marked merit, among which are papers on the Relations of the Periosteum to Osteogenesis, a New Method of treating Ununited Fractures, by the senior Editor, and a very elaborate article on Cholera by Dr. Houston, of Richmond. The Editors have adopted the policy of paying for original communications, by which they hope to secure contributions of more intrinsic value than if they depended upon the voluntary aid of their friends. We should think this a somewhat hazardous experiment in starting a new periodical, especially when we consider the financial condition of the Southern country at the present time. The Editors also announce that "nothing of a personal, political or controversial character will be published in its pages." They likewise promise valuable contributions to medicine and surgery growing out of the experiences of the late war. The second number is a marked improvement upon the first in every way, and the Journal bids fair to take a place in the very front rank of American medical periodicals.

The *Savannah Medical Journal* for January is the re-appearance of the journal formerly published by the Savannah Medical College. Suspended for the past four years, it is now published under the auspices of the Georgia Medical Society. Prosperous as it was under the old Editors, its friends may confidently look for increased success under the present more enlarged plan of administration. The present Editors are Dr. Juriah Harris, Professor of Physiology in Savannah Medical College, Dr. J. B. Read, Professor of Materia Medica in the same institution, and Dr. J. G. Thomas. Among other interesting papers in the January number is one on a remarkable case of Elephantiasis of the Scrotum and Genital Organs, illustrated by a lithographic plate. Numerous errors of the press disfigure the number before us, but we cannot help regarding it, as a whole, as highly creditable to the energy and professional zeal of the Editors. It is not hard to appreciate the difficulties under which any such enterprise as this in the region in which it is published must struggle at the present time, and we feel that its originators and promoters are worthy of all praise. We sincerely wish them success. The second number of the *Savannah Journal* has not yet reached us.

The Cincinnati Journal of Medicine. This is a monthly periodical of fifty pages, edited by Professors George C. Blackburn, Theophilus Parvin and Robert Bartholow. The numbers for January and February have been received, and they are full of valuable matter. They each contain important original articles by each of the Editors, and the foreign intelligence in their correspondence, translations and selections from foreign medical journals is of much value. Each number of the Journal will contain a *résumé* of the proceedings of the Cincinnati Academy of Medicine. And, by the way, we would say that this Academy has been engaged for a number of weeks in a systematic, careful discussion on Asiatic Cholera which does its members a great deal of credit. These discussions have been based on carefully prepared papers presented at the different meetings by a number of members, embodying the principal facts in its etiology, and giving the results of their individual experience. We observe that the doctrine of communicability, not to say the positive contagiousness of this disease, has strong advocates. The Academy have not, so far as we have learned, passed any *resolutions* on the subject, and the wisdom and professional dignity of their whole course is in striking contrast to the hasty action of a certain learned professional body to which some of our readers at least are not strangers, on this very important matter. The *Cincinnati Journal* is a credit to the Editors, to the city where it is published and to the medical profession of the country.

The last to enter the field is New York with its *Medical Record*, the first number of which, bearing date March 1st, is before us. This is a semi-monthly publication and promises to make good the gap too long left vacant by the demise of the New York Medical Times. It is printed in quarto form, contains twenty-four pages of reading matter in double columns to each number, and in its general physiognomy puts one in mind of the London weekly medical journals. It is under the editorial management of Dr. George F. Shrady, of New York, who promises communications from a number of eminent members of the profession in that city and elsewhere. When we state that the number before us contains original papers by Drs. Van Buren, Buck, Flint, and Post, of New York, and Dr. Williams, of Cincinnati, and a full report of a lecture by Dr. Gaillard Thomas, we can hardly say more to recommend it to our readers. Other features of special interest are reports of cases in New York, Brooklyn City, and Bellevue hospitals, descriptions of improved surgical instruments with illustrations, and the other various matters which are usually comprised in journals of its class. The first number certainly gives good promise for the future; and we cannot doubt that the metropolis of the country is at last to have a Journal which shall be a fair representative and exponent of the daily practice and scientific progress of the medical profession within its confines. It is to be regreted that at present it will appear but twice each month. Surely in New York there must be material enough to fill such a Journal every week. The *Medical Record* is well printed.

Monument to Commemorate the Discovery of the Anæsthetic Properties of Sulphuric Ether.—A wealthy citizen of Boston has placed a liberal sum of money at the disposal Messrs. Ware and Van Brunt, architects, to commemorate the great medical discovery of modern times. It is intended as an expression of thanksgiving, as it were, for the great alleviation which it has brought to human suffering, and the monument which these gentlemen have designed is intended to convey this in a poetic form. Its base is square in plan and set in the centre of a pool twenty-three feet square. On the four faces of the base are niches containing sculptured foliage and heads, the latter being fountains by which the pool is supplied with water. This base diminishes gradually by successive courses of moulding to a die, which is the central and most important feature. Each face of this die contains an inscription surmounted by an alto relievo in marble, and is protected by an overhanging pointed arch supported by stunted shafts of red polished Gloucester granite; above these overhanging hoods the mass of the monument diminishes by a series of mouldings and prismatic surfaces till a proper base is reached, whence arises a grouped shaft six feet high, of red polished granite, supporting as a finial a group of two figures of heroic size, portraying the idea of the relief of suffering. In order to express this in the plainest language, the story of the Good Samaritan has been selected as most familiar and perhaps most typical of the idea. The structure is about thirty feet high, and, with the exceptions above indicated, is to be of white Concord granite. The capitals are highly sculptured, and the whole monument is to be executed with all the care and delicacy of which the material is capable. The four alto relievos in marble and the granite group at the top are to be executed by Mr. J. Q. A. Ward, Sculptor, of New York; and there can be no doubt from the well-known genius of the sculptor, that his part of the work will be in keeping with the general sentiment and beauty of the design and the enlightened liberality which gave origin to it. The monument is to stand in the Public Garden, facing Marlborough Street.

Commencement at Harvard Medical School.—The graduating exercises of the Harvard Medical School took place at the College in Grove street, on Wednesday, the 7th inst. An unusually large class of graduates received their diplomas. The theses selected to be read by their authors did them much credit, and instances might be referred to showing original research and independent thought on the part of the writers, quite above what is common in such compositions. The address to the graduating class by the senior member of the Faculty, Prof. Storer, was listened to with special interest. Claiming in virtue of his position an almost paternal relation, he availed himself of the opportunity to lay before them in a friendly and most eloquent manner a picture of the difficulties and struggles which inevitably lie in the path of every devoted and conscientious member of the medical profession, at the same time that he enforced the duties growing out of them, and encouraged them by his wise counsels and emphatic assurances to feel confident of ultimate success in an honorable career.

The following gentlemen have been appointed a committee to aid the Medical Faculty of Harvard University in carrying out their design of publishing a complete catalogue of the past students of the Medical School, as stated in the notice in our advertising columns.

Henry I. Bowditch, *in behalf of Faculty.* Anson P. Hooker, *Asst. Surg.-Gen. of Mass.*

Committee from the present Medical Class.

J. F. A. Adams, U. S. Navy.
H. P. Bowditch, Mass. Vol. Cav.
L. F. C. Garvin, " " Inf.
C. K. Packard, Maine Vol. Inf.
R. P. Sawyer, Maine, U. S. N.
M. L. Gerould, New Hampshire, U. S. N.
E. J. Morgan, " " Vol. Inf.
W. Butler, U. S. N.
Henry L. Hammond, Conn. Vol.
I. L. Clark, Rhode Island Vol. Inf.
M. B. Campbell, Vt., U. S. A.
E. H. Pettingill, Vt. 16th Vol. Inf.
R. D. Barber, New York 85th N. Y. Vol.
E. F. Spaulding, Wisconsin 7th Vol. Inf.
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Neil Sutherland, Nova Scotia, Mass. V. I.
R. Boyd, New Brunswick.
J. A. McDonald, Prince Edward's Island.
C. R. J. Kellam, Arkansas, U. S. A.

Massachusetts Medical College.—The following gentlemen received their degrees from Harvard University on the 7th inst.:—

Name and Residence.	*Thesis.*
Adams, James Foster Alleyne, *Boston,*	Infantile Paralysis.
Ahearne, Cornelius Augustus, *Boston,*	Inflammation.
Allen, George Otis, *E. Jaffrey, N. H.*	Miasmatic Fevers.
Appell, Jacob Franklin, *Needham,*	Tuberculosis.
Atherton, Alfred Bennison, *Fredericton, N.B.*	Fractures.
Barber, Rio Delos, *Little Genesee, N. Y.*	Impure Drinking Water.
Birch, James Gulick, *Newburgh, N.Y.*	Typhoid Fever.
Braman, Chandler Balch, A.B., *Brighton,*	Nicotine.
Breck, Theodore Frelinghuysen, *Springfield,*	Typhoid Fever.
Bunting, Joseph Lordly, *St. John, N. B.*	Digestion.
Butler, Winthrop, *Tisbury,*	Scurvy.
Calder, James Squair, *Pictou, N.S.*	Puerperal Fever.
Campbell, Merritt Bates, *Rutland, Vt.*	Erysipelas.
Chamberlain, Nathan Savery, *E. Stoughton,*	Sulphuric Ether.
Chase, Willard Dunlap, *Claremont, N. H.*	Pneumonia.
Coleman, Cornelius Francis, *Greenfield,*	Cinchona.
Cushing, Stephen, *Boston,*	Intermittent Fever.
Damon, Orison Benjamin, *Rutland, Ill.*	Intermittent Fever.
De Wolf, James Edward, *Danvers,*	Collateral Essentials.
Dryer, Robert Spencer, *Utica, N. Y.*	Scurvy.
Eddy, George Stetson, *Fall River,*	Diagnosis and Treatment.
Fixott, Henry James, *Arichat, C. B.*	Human Teeth.
Francois, Edward Albert Lewis, *Charlestown,*	Rheumatism.
Franks, Louis Edward, *Needham,*	Obstetrics.
Fullerton, Thomas Renton, *Pictou, N. S.*	Climate.
Gardner, Clarence Tripp, *Pawtucket, R. I.*	Intermittent Fever.
Garland, Albert Stone, A.B., *Gloucester,*	Diphtheria.
Gerould, Martin Luther, *Stoddard, N. H.*	Malaria.
Green, John Orne, A.B., *Lowell,*	Amputations.
Hall, Thomas, Jr., *Boston,*	Hysteria.
Harris, Edward Mowry, *E. Putnam, Ct.*	Variola.
Harvey, Edwin Bayard, A.M., *Boston,*	Mind a Remedial Agent.
Heath, Sylvanus, *Franklin, N. H.*	Delirium Tremens.
Hobart, Matthew Thornton, A.B., *Coburg, C. W.*	Pneumonia.
Huse, Ralph Cross, Jr., *Newburyport,*	Chronic Inflammation of the Uterus.
Ingalls, Richard Mayberry, *Boston,*	Vesico-Vaginal Fistula.
Jamison, George Alexander, *Tangier, N. S.*	Erysipelas.
Johnson, Otis Henry, A.B., *Haverhill,*	Scurvy.
Lynam, John Patterson, *Chelsea,*	Scarlatina.
McDonald, James Athanasius, *Charlottetown, P. E. I.*	Epilepsy.
McKeagney, Robert William, *Sidney, C. B.*	Inflammation.
Mercer, William Marcelline, *Lawrence,*	Cholera.
Milliken, Charles James, *Cherryfield, Me.*	Variola.

Name and Residence.	*Thesis.*
Morgan, Edwin Jeremiah, *Plymouth, N. H.*	Intermittent Fever.
Munroe, George,	Fracture of the Thigh.
Munroe, William Francis, *Bradford,*	Rheumatic Diathesis.
Munde, Paul Fortunatus, *Northampton,*	Medulla Oblongata.
Munn, Curtis Emerson, *Westfield,*	Phthisis.
Ogden, William Martin, *Boston,*	Hepatic Cell Life.
Oleson, Charles Wilmot, *Portland, Me.*	Hospital Gangrene.
Osgood, George Cowles, *Charlestown,*	Spinal Column.
Packard, Charles Kittredge, *Portland, Me.*	Typhoid Fever.
Parke, John Gray,	Uriniferous Tubes.
Payne, Frederick William, *Bath, Me.*	Typhoid Fever.
Parker, Scollay, *Boston,*	Yellow Fever.
Perkins, Roger Elliott, *Concord, N. H.*	Ingesta.
Richards, William Hughes, *Chatham,*	Gout.
Rice, Charles Henry, *Ashby,*	Hæmoptysis.
Robinson, Charles Blake, *Newport, Me.*	Croup.
Shattuck, Henry Perkins, *Buffalo, N. Y.*	Chronic Diarrhœa.
Spaulding, Ebenezer Farrington, *Janesville, Wis.*	Tuberculosis of Hip Joint.
Stanton, Nathaniel Greene, *Providence, R. I.*	Opium.
Stuart, George Albert, *Boston,*	Physical Culture of Children.
Sturtevant, Edward Lewis, A.B., *Boston,*	Typhoid Fever.
Talbot, Charles Carroll, *Newburyport,*	Acute Gastritis.
Tracy, William Clinton, *Cambridge,*	Meningitis.
Walker, Augustus Chapman, *Roxbury,*	Diarrhœa.
Wilder, Burt Greene, B.S., *Boston,*	On the Human Hand.
Williams, James Long, *Boston,*	Medical Science.
Wilmarth, Jerome, *Milford,*	Lobelia Inflata.

George C. Shattuck, M.D.,
Wednesday, March 7, 1866. *Dean of the Medical Faculty.*

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, March 3d, 1866.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week	37	32	69
Ave. mortality of corresponding weeks for ten years, 1856—1866	41.1	40.7	81.8
Average corrected to increased population	00	00	89.10
Death of persons above 90		0	0

Communications Received.—Resolutions relating to the death of Dr. Abraham Gould, of Lynn.—Case of Opium Poisoning.

Pamphlets Received.—Second Annual Report of the Board of State Charities; to which are added the Reports of the Secretary and the General Agent of the Board.—Memorial of Dr. John Evans, praying for the establishment of quarantine regulations for the prevention of the spread of cholera. U. S. Senate. Mis. Doc. No. 66.—Rhode Island Twelfth Registration Report.—L'Union Médicale, Dix-neuvième année, Nos. 143-146, 150-155. Vingtième année, Nos. 1-20.—Introductory Address at the opening of the Sixth Session of the Miami Medical College, of Cincinnati, Nov. 1st, 1865, by George Mendenhall, M.D., Professor of Obstetrics.

Died,—At Eastport, Me., 20th ult., Dr. Robert Mowe, 79.—At Perth Amboy, N. J., 3d inst., Dr. Henry M. Stone.—At Ridgefield, Conn., 12th ult., Dr. Nehemiah Perry.

Deaths in Boston for the week ending Saturday noon, March 3d, 69. Males, 37—Females, 32. Abscess, 1—apoplexy, 1—asthma, 1—inflammation of the bowels, 1—disease of the brain, 3—bronchitis, 2—cancer, 2—cerebro-spinal meningitis, 2—consumption, 12—convulsions, 1—croup, 4—cystitis, 1—diabetes, 1—diarrhœa, 3—dropsy of the brain, 6—dysentery, 1—scarlet fever, 3—infantile disease, 3—intemperance, 1—congestion of the lungs, 1—inflammation of the lungs, 6—marasmus, 2—old age, 1—peritonitis, 1—premature birth, 1—scalded, 2—scrofula, 1—disease of the stomach, 1—unknown, 4.

Under 5 years of age, 34—between 5 and 20 years, 6—between 20 and 40 years, 10—between 40 and 60 years, 14—above 60 years, 5. Born in the United States, 49—Ireland, 13—other places, 7.